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## Editorial

### **A New Roadmap for *Laterality: Asymmetries of Brain, Behaviour, and Cognition***

In the inaugural (1996) issue of *Laterality: Asymmetries of Body, Brain and Cognition*, the founding editors – Phil Bryden, Michael Corballis, and Chris McManus – laid out the need for a journal that brought together work from diverse disciplines to create better understanding of the causes, correlates, and consequences of our asymmetric brains. As the journal enters its 25<sup>th</sup> year, we are still committed to publishing high quality research on lateral asymmetry, drawing from such diverse domains (amongst others) as experimental psychology, animal behaviour, cognitive neuroscience, linguistics, genetics, developmental sciences, kinesiology, anthropology, sport science, and the visual arts. Although journals exist that specialise in each of these areas, *Laterality* remains an interdisciplinary forum in which multiple perspectives and methodologies come together to address our shared research questions.

*Laterality* has always had a *triumvirate* of Co-editors, instead of the conventional Editor-in-Chief-plus-Associates structure. In 2016, Chris McManus stepped down from his role as Co-Editor, followed in 2018 by Mike Nicholls and Giorgio Vallartigara. This formidable team combined to provide 40 years of editorial service, and we owe them tremendous gratitude for their wise stewardship of the journal. We now have a new editorial team in place. Gina Grimshaw replaced Chris in 2016, with Markus Hausmann and Lesley Rogers becoming Co-Editors in 2019, joined by Book Review editor Gillian Forrester. In this editorial, we lay out our aims for *Laterality*, and outline some changes ahead.

**Aims and Scope.** The journal will continue its mission to publish research on all aspects of lateralisation in human and non-human species, including its psychological, behavioural, neural, genetic, or other biological manifestations, and representing the full range of relevant methodologies. To that end, we have ensured that our editorial team combines expertise in laterality research with both human and non-human animals. Many of the most exciting recent developments in our discipline are driven by animal research, and we explicitly call for submissions that use animal models to further our understanding of laterality. We are also keen to accept submissions that use neuroscience methods including functional and structural imaging, brain stimulation, computational modelling, and patient-based research. These methodologies have the potential to answer questions about lateralisation that are not possible with purely behavioural or cognitive methods. Although we are actively seeking to extend our coverage in these areas, we maintain our commitment to publish quality research that uses any methodology to advance knowledge.

**Editorial Board.** To help us achieve our aims, we have recruited a team of Consulting Editors; laterality researchers with expertise in a wide range of methodologies and theoretical perspectives who are committed to success of the journal. Consulting Editors will support the journal's aim to ensure consistent application of editorial standards, enhancing the quality of the review process and ultimately the research we publish. The Co-Editors also continue to be supported by an Editorial Advisory Board of established laterality researchers who have made substantial contributions to the field.

**The Journal's Name.** As of 2020, we are no longer *Laterality: Asymmetries of Body, Brain and Cognition*, and are instead *Laterality: Asymmetries of Brain, Behaviour, and Cognition*. This is a subtle change to the subtitle, but puts the *brain* front and centre, reflecting a clear focus on the neurosciences and their integration with the behavioural and cognitive

sciences. Moreover, the swapping of “*body*” for “*behaviour*” reflects the fundamental importance of behaviour – in both human and non-human species – for the understanding of brain asymmetries. The change in the subtitle is a better reflection of the research community we represent, yet will not affect how journal metrics are calculated.

**Transparency and Openness.** In 2019, the editorial team signed the Transparency and Openness Promotion Guidelines, signalling our commitment to editorial policies that will strengthen the credibility of laterality research. Many of these are inspired by the sea change in scientific practices brought about by the *credibility revolution* (Vazire, 2018) that originated in psychology, but is now extending across scientific disciplines. The aim of these practices is to ensure the reproducibility and replicability of laterality research while creating space for exploratory research and theory-building. In 2020, authors will see the following changes:

*Submission Guidelines.* Revised submission guidelines provide information on the clear reporting of methodology and analysis, ensuring that research is *reproducible* (that is, other researchers reach the same conclusions using the same data) and more likely to be *replicable* (that is, other researchers reach similar conclusions, if the study is repeated). Sample sizes should be justified, and sufficient to support the conclusions. We understand that large samples are not always possible in many types of research, and that studies with small samples can make important contributions to accumulated knowledge. In such cases, it is important though that limitations are acknowledged and that any conclusions are supported by data. We also ask authors to distinguish between confirmatory and exploratory analyses, and encourage pre-registration of these in a date-stamped repository, when appropriate (Nosek et al., 2018). These steps increase the validity of statistical

inferences and will help us to build a solid and credible knowledge base from which to make scientific advances.

*Data Sharing.* Authors are asked to share their data and analyses in a secure accessible repository and are encouraged to share their research materials. Exemptions are possible when data sharing is not possible due to ethical or other considerations; however, in such cases authors should still be prepared to share data with editors and reviewers. Data sharing contributes to transparency and reproducibility of analyses. It also allows for reanalysis of data when new analytical techniques become available, for re-use of the data to address new research questions, and for collation of the data in meta-analyses and systematic reviews (Klein et al., 2018). Citation standards will ensure that authors are appropriately credited when their data are used.

*Registered Reports.* In 2020, the journal will accept a new article format, the registered report. Stage 1 manuscripts include the introduction, method, and planned analyses. They are then reviewed and may be offered Stage 1 acceptance (often after some revision). Authors conduct the research, and then write the Results and Discussion sections of the paper. Stage 2 review of the manuscript is not contingent on the specific results reported. Registered reports provide the advantages of pre-registration, with two additional benefits (Chambers, 2019). First, authors are able to benefit from reviewers' expert advice *before* conducting the research. Second, in-principle-acceptance, before results are known, guards against publication biases which are known to keep null results out of the literature. We encourage registered reports for the conduct of replication studies and original research that are theoretically important to the field.

**Article Formats.** Laterality will continue to accept empirical research articles, theoretical perspectives, systematic and narrative reviews, meta-analyses, methodological primers and

tutorials, book and media reviews, commentaries, and correspondence. We do not impose a word limit, as articles should be as long as needed to accurately and transparently communicate the work – but not longer. A new initiative, led by Consulting Editor Guy Vingerhoets, is the publication of a community-endorsed set of recommended laterality indices for the full range of methodologies used with human participants. We are happy to consider the publication of special issues, or of other types of submission that further the aims of the journal.

**Format Free Submission.** *Laterality* follows a new policy that allows authors to submit their work without the additional step of formatting the manuscript to meet journal requirements. Instead, we simply ask that authors use a consistent citation format and include everything needed for peer review (see further details in submission guidelines). Once an article is accepted for publication, we will do all the work of reformatting it to *Laterality's* editorial style. This new policy will hopefully provide authors with more time for their research.

**The Road Ahead.** The founding editors saw the need for a journal that brought together research, and researchers, who shared questions but not methodologies. In the intervening 25 years, our individual disciplines have become more and more specialised, and we have witnessed the proliferation of journals with narrower and narrower focus. The need for an interdisciplinary journal has never been greater. The overarching aim of our editorial team is to solidify the central role of *Laterality: Asymmetries of Brain, Behaviour, and Cognition* in the diverse international research community we represent. We look forward to serving.

*Gina Grimshaw  
Markus Hausmann  
Lesley Rogers*

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